

Remarks

The indicated allowability of claims 8, 9, 19 and 20 is noted with appreciation. By way of the foregoing amendments, claim 19 has been rewritten in independent form and claim 20 remains dependent therefrom. Accordingly, claims 19 and 20 presumably are now allowable.

Likewise, claim 8 has been rewritten in independent form and presumably is now allowable.

Allowable claim 9 has been amended to depend from claim 1 which has been amended to include the language of claim 5 which has been cancelled. Claim 1 also has been amended, in order to advance prosecution of this application, to specify that "the processor is operable to respond to at least one of the temperature sensors indicating that the temperature is falling with time." In view of the following discussion, amended claim 1 is submitted as being allowable as are the remaining claims that depend directly or indirectly from claim 1 for at least the same reasons.

Rejected claim 18 been cancelled without prejudice in order to advance the prosecution of this application. Applicant reserves the right to pursue the subject matter of claim 18 and the other claims as originally presented in a continuation application.

The present application describes a liquid level indicator that relies on the vaporization of a compressed volatile liquid such as propane occurring when the tap of the container is opened and the vapor is allowed to exit the container. This results in a significant temperature difference occurring (due to the latent heat of vaporization) in the vicinity of the liquid level, which can be detected by the two temperature sensors of the indicator. Thus, when such temperature difference is detected, it may be assumed that the liquid level is adjacent the two sensors.

However, in practice there may be difficulties with such detection. If, for example, the container is left out in sunlight, selective heating of certain areas of the container may occur leading to a false indication due to the measured temperature difference, even if the liquid level is nowhere near the two sensors. It has been found that an effective way of overcoming this problem is for an additional check to be made on the overall temperature of the container (as measured by one or both of the sensors). If the overall temperature is falling (this is a consequence of the latent heat effect of the vaporization as the liquid vaporizes in use), then the temperature difference measured between the two sensors can reliably be assumed to indicate the liquid level.


The applied references do not appear to disclose or suggest anything similar to such a technique. In fact, the disclosed techniques appear to rely on measurements made at a specific point in time, rather than measurements over time that enable detection of falling temperature.

As amended, claim 1 recites a liquid level indicator comprising a plurality of temperature sensors spaced apart from one another, a processor operable to process the output of at least two of the temperature sensors, and an indicator means for providing an indication of the liquid level in response to an output of the processor; wherein the processor is operable to respond to the difference between the outputs of the temperature sensors, and wherein the processor is operable to respond to at least one of the temperature sensors indicating that the temperature is falling with time. The applied references have not been found to describe or suggest the subject matter of amended claim 1. Therefore, the prior art rejections should be withdrawn.

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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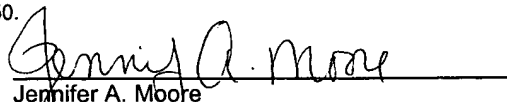
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